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EOPHASMA JURASICUM N. G. N. SP., A NEW FOSSIL NEMATODE
OF THE SINEMURIAN OF OSTENO IN LOMBARDY

Abstract. — The new genus and new species *Eophasma jurasicum* is here described. It was found in the Sinemurian deposit of Osteno in Lombardy. This is the only nematode reported in mesozoic terrains to date.

Riassunto. — Viene descritto il nuovo genere e la nuova specie *Eophasma jurasicum*, rinvenuto nel giacimento sinemuriano di Osteno in Lombardia. Si tratta dell'unico nematode fino ad oggi segnalato nei terreni mesozoici.

The fossil fauna of the Sinemurian deposit of Osteno in Lombardy⁽¹⁾, that has been studied for several years by the Department of Paleontology, Museo Civico di Storia Naturale, in Milan, is well-known for its particular conditions of preservation. This is due to the fact that the fauna contains organisms that, in the process of fossilization have preserved not only the more resistant structures, but also traces of soft tissues.

Hence, as is only natural, totally soft-bodied organisms of this fauna, that normally do not fossilize, assume a particular interest. In previous publications we have described a cephalopod complete with tentacles (PINNA 1972), an enteropneust (ARDUINI, PINNA & TERUZZI 1981) and

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(1) The Osteno deposit is situated on the east bank of Lugano Lake, in the province of Como. The fossil-bearing strata of the deposit, which are attributed to the Lower Sinemurian, « *bucklandi* zone », on the basis of the presence of *Coroniceras bisulcatum* (PINNA 1967), contain the remains of numerous organisms, including plants, fishes, cephalopods, echinoderms, worms of various types and numerous species of crustaceans. Part of this material has been the basis of a series of publications (PINNA 1967, 1968, 1969, 1972; ARDUINI, PINNA & TERUZZI 1980, 1981, 1982; PINNA, ARDUINI, PESARINI & TERUZZI 1982).

a new genus of errant polychaetes, of which numerous specimens have been found (ARDUINI, PINNA & TERUZZI 1982).

This publication is devoted to some nematodes, probably free ones, of which, besides the outline of the body, traces of the oesophagus and intestine have been preserved.

Nematodes in the fossil state are extremely rare. Marine nematodes have been found only in the Pennsylvanian of Mazon Creek (SCHRAM 1973) and in the Mississippian of Montana (SCHRAM 1979). As regards the non-marine nematodes, STØRMER (1963) has described parasite nematodes of a scorpion found in rocks of the Lower Carboniferous in Scotland; parasite nematodes of insects and free nematodes have been found in the Oligocene ambers of the Baltic Sea (VON HEYDEN 1860, 1862; VON DUISBURG 1862; MENGE 1863, 1872; TAYLOR 1935; DOLFFUSS 1950); POINAR (1977) has described some nematodes found in the Upper Oligocene ambers in the State of Chiapas (Mexico); parasite nematodes have also been found in mammals fossilized in ice, in Siberia (DUBININ 1948); traces, attributed to nematodes have also been reported in rocks of the Green River Formation (Middle Eocene, Utah) (MOUSSA 1969).

The specimens examined kept in the Collections of the Museo Civico di Storia Naturale, Milan, are six in all; they are attributed to the new genus and species *Eophasma jurasicum*.

Class Nematoda

Gen. *Eophasma* nov.

Etymology: from the Greek *εως* = dawn and *φάσμα* = apparition.

Type species: *Eophasma jurasicum* n. sp.

Description: same as type species.

***Eophasma jurasicum* n. sp.**

Etymology: from the age of the specimens.

Holotype: No. i 784, Collection of the Museo Civico di Storia Naturale, Milan.

Paratypes: Nos. i 783, i. 785, i 786, i 790, i 1685, Collection of the Museo Civico di Storia Naturale, Milan.

Place of Discovery: Osteno, Como.

Geological age: Lower Sinemurian, « *bucklandi* zone ».

Description.

Elongate, vermiform body (dimensions of the holotype: length, approx. 55 mm maximum width, approx. 2 mm); annular in the anterior part that becomes progressively less accentuated as it proceeds towards the caudal region; posterior part of the body tapers away ending in a sharp point.

In the buccal region no evident structures are to be seen; in the specimen i 784 some dark sclerotized structures that could be denticles are to be found.

The oesophagus, that is particularly well preserved owing to the consistency of the muscle tissues that form it, is rather short and limited to the most anterior part of the body. This is followed by the intestine, under the form of a dark trace that occupies the rest of the animal. Between the oesophagus and the intestine there is a structure of a certain consistency, even if it is less than that of the oesophagus, that could perhaps be that very structure observed in some living nematodes; the structure that was interpreted by CHITWOOD & CHITWOOD (1950, p. 87, fig. 87, J) as the intestinal-oesophagus valve in the genus *Desmolainus*, and that which DE CONINCK (1965, p. 179, fig. 247) defined as « partie ventriculaire de l'intestin » in the genus *Anisakis*.

A few, extremely short setae are to be found on some specimens, localized both in the anterior and posterior regions of the animals.

The structures preserved, however, are so few that the genus *Eophasma* cannot be attributed to any group of living nematodes.

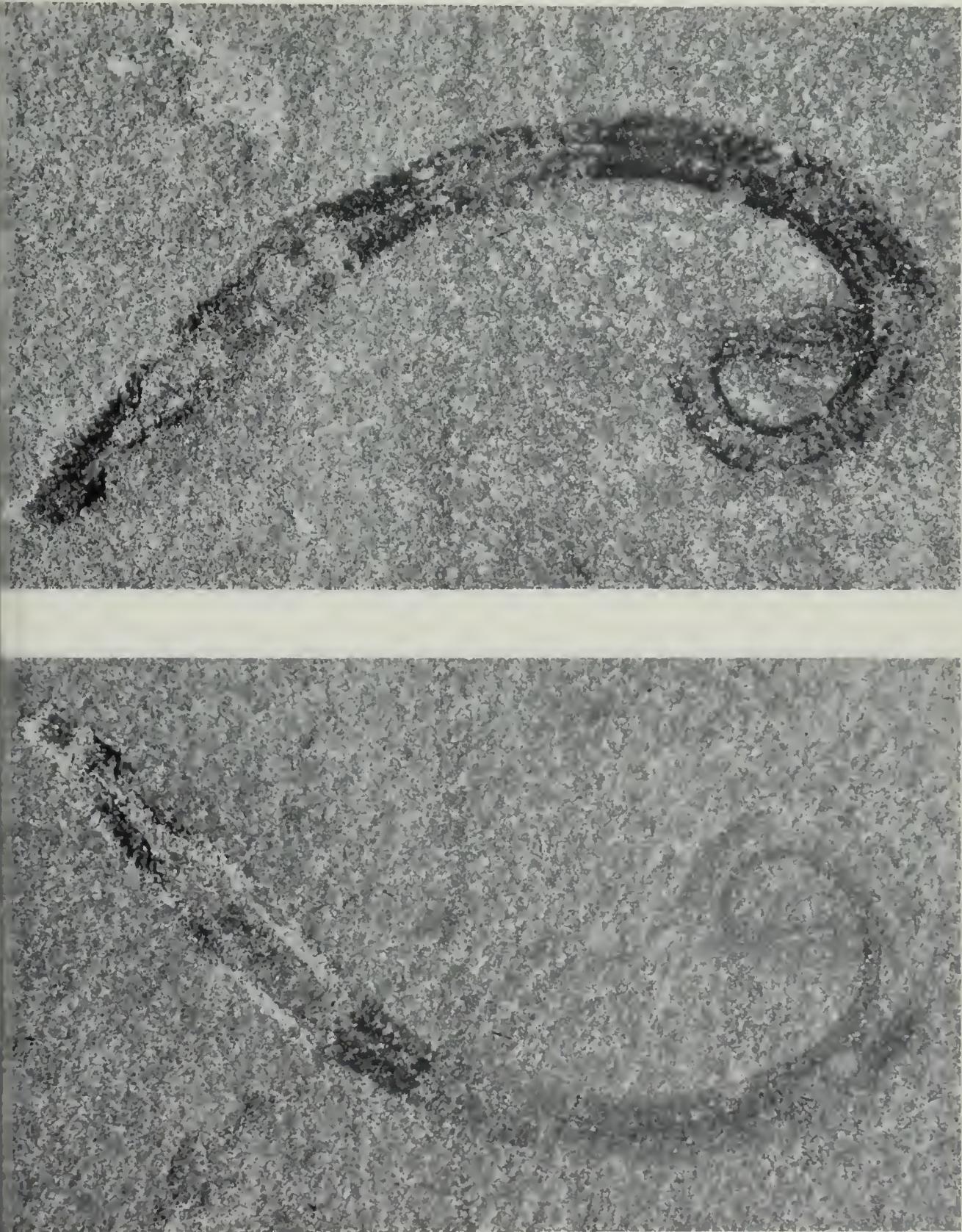
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R E F E R E N C E S

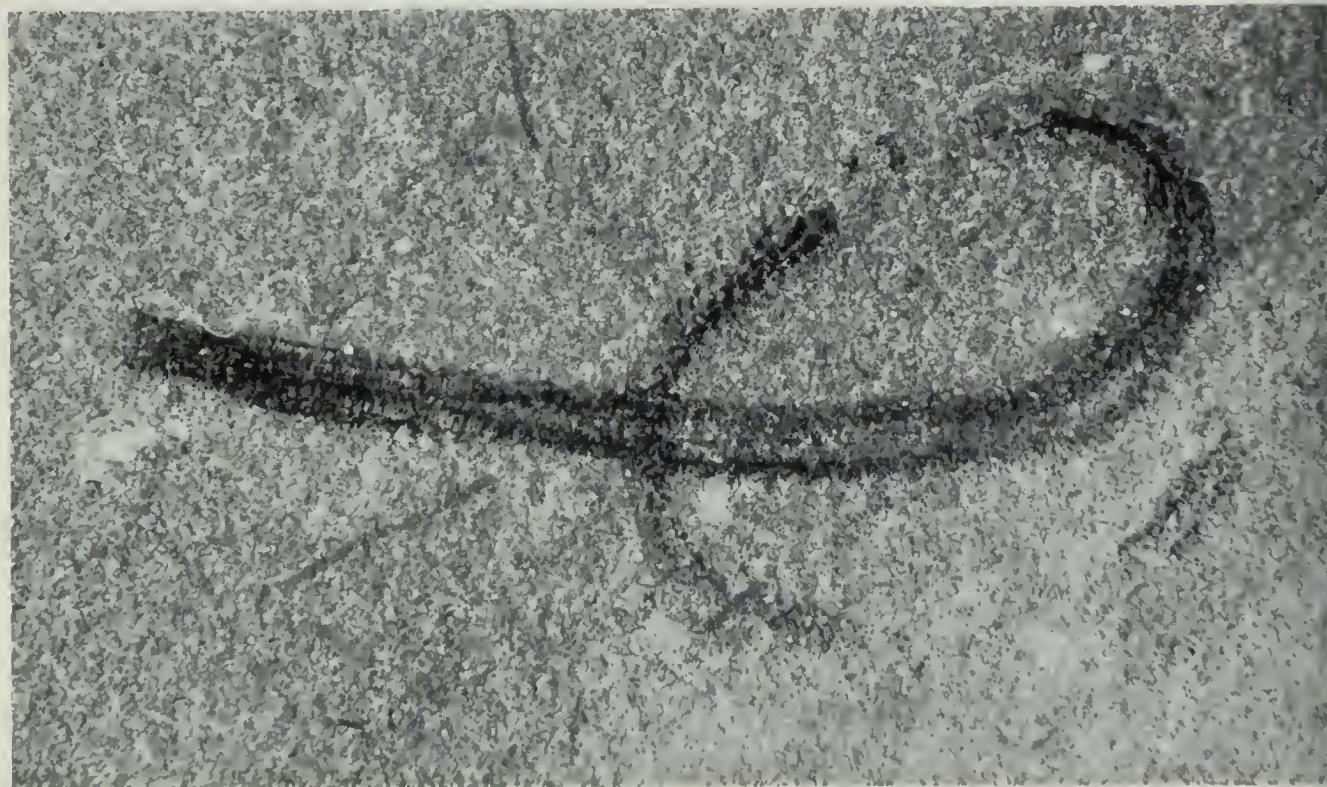
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TAV. I. — Fig. 1. - *Eophasma jurasicum*. Holotype. N° cat. i 784 ($\times 4,5$). —
Fig. 2. - Idem. Holotype, same specimen, counterpart. N° cat. i 784 ($\times 4,5$).

Photographs by L. Spezia



TAV. II. — Fig. 1. - *Eophasma jurasicum*. Complete specimen. N° cat. i 783 ($\times 6$). —
Fig. 2. - Idem. Same specimen, counterpart. N° cat. i 783 ($\times 6$).

Photographs by L. Spezia